

WHAT IS CLAIMED IS:

1. A capsule endoscope comprising a capsule portion,
the capsule portion comprising at least:

an observation optical unit having an image pick-up
element and an optical lens that forms an objective optical
system;

an illuminating unit having an illuminating substrate,
a surface emission light source, and a light-emitting
control circuit;

peripheral-circuit parts which form various circuits
including a signal processing circuit, a receiving and
transmitting circuit, and a control circuit; and

a power source unit which supplies power to the
observation optical unit, the illuminating unit, and the
peripheral-circuit part.

2. A capsule endoscope according to Claim 1, wherein
the surface emission light source is arranged around the
observation optical unit.

3. A capsule endoscope according to Claim 1, wherein
the surface emission light source is arranged on the surface
of the capsule portion out of the field of view of the
objective optical system.

4. A capsule endoscope according to Claim 1, wherein the surface emission light source is an electroluminescence device.

5. A capsule endoscope according to Claim 1, wherein the surface emission light source is an organic light-emitting device containing a low-molecular-weight organic light-emitting material.

6. A capsule endoscope according to Claim 1, wherein the surface emission light source is an organic light-emitting device containing a high-molecular-weight organic light-emitting material.

7. A capsule endoscope according to Claim 1, wherein the surface emission light source is an inorganic light-emitting device containing an inorganic light-emitting material.

8. A capsule endoscope according to Claim 1, wherein the surface emission light source is a surface emission laser diode.

9. A capsule endoscope according to Claim 1, wherein

the surface emission light source is formed as an R-, G-, and B-matrix.

10. A capsule endoscope according to Claim 1, wherein the surface emission light source is divided and is arranged on the illuminating substrate.

11. A capsule endoscope according to Claim 10, wherein the surface emission light source is divided into sources for R, G, and B and is arranged.

12. A capsule endoscope according to Claim 1, wherein the surface emission light source has an optical member for light condensing or diffusion on the top surface thereof.

13. A capsule endoscope according to Claim 1, wherein the surface emission light source is arranged on a flexible substrate.

14. A capsule endoscope according to Claim 4, further comprising:

illuminating direction changing means which changes an illuminating direction of the surface emission light source on the illuminating substrate.

15. A capsule endoscope according to Claim 14, wherein the illuminating direction changing means comprises:

a bottom electrode arranged on the illuminating substrate;

a top electrode arranged facing the bottom electrode;
and

a spacer member which forms a predetermined electrostatic gap between the bottom electrode and the top electrode.